COMPLEX TREATMENT OF PREGNANT WOMEN WITH UNDIFFERENTIATED CONNECTIVE TISSUE DYSPLASIA

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https://doi.org/10.5281/zenodo.10617165

Annotation. Dysplasia (disorder of formation) of connective tissue is a genetically determined pathological condition of organs and tissues, manifested in a decrease in the content of certain types of collagen or a violation of their ratio and leading to a decrease in the strength of the connective tissue of many organs and systems. complex therapy with Magnerot and BIMPnch in pregnant women with uCDT can reduce the severity of clinical manifestations of NCD syndrome and improve QoL. In pregnant women with signs of circulatory disorders in the mother-placenta-fetus system, the proposed therapy improves hemodynamic indicators.

Keywords. Undifferentiated connective tissue dysplasia (uCTD), connective tissue (CT), mitral valve prolapses (MVP), systolic blood pressure (SBP), diastolic blood pressure (DBP), heart rate (HR), neurocirculatory dystonia (NCD).

Relevance. Dysplasia (disorder of formation) of connective tissue is a genetically determined pathological condition of organs and tissues, manifested in a decrease in the content of certain types of collagen or a violation of their ratio and leading to a decrease in the strength of the connective tissue of many organs and systems.

In 1990, at a symposium in Omsk devoted to the problem of congenital systemic dysplasia of connective tissue, a classification was adopted with the allocation of 2 groups of this pathology. The 1st group includes systemic hereditary syndromes – Marfan syndrome, Ehlers-Danlos syndrome, polycystic kidney disease in adults, mucopolysaccharidosis, etc., the 2nd group includes undifferentiated hereditary connective tissue diseases with locomotor-visceral manifestations from:

- cardiovascular system: valve prolapses; abnormally located chords; angiodysplasia (arterial, venous, mixed); small atrial septal aneurysm; insufficiency of the valvular apparatus of the lower extremities;

- respiratory: polycystic disease; spontaneous pneumothoraxes of unknown etiology; tracheobronchial dyskinesias;
- gastrointestinal: visceroptosis; gallbladder abnormalities; dolichosigma;
- kidneys: nephroptosis; developmental abnormalities, etc.;
- eye: myopia; epicanth; colobomas; ptosis; progressive vision pathology;
- skeletal: chest and spinal deformities; thumb symptom and/or wrist symptom; arm span / height >1.03;
- joints: hip dysplasia; flatfoot; joint hypermobility;
- Skin: increased skin extensibility (2.0 to 3.0 cm); Hernia.

Additional signs of connective tissue "weakness": short and crooked little fingers; IV finger of the hand is smaller than II; "sandal-shaped" 1st interdigital fissure, etc.

The prevalence of undifferentiated connective tissue dysplasia (uCDT) ranges from 20–25% to 85% [3].

Of the dysplastic manifestations of the internal organs, the most interesting are changes in the heart. The most common manifestation of this pathology is idiopathic mitral valve prolapse (MVP), the incidence of which is 2.5–20% [3, 5, 7]. Patients with MVP are predominantly female, especially those aged 20–29 years [8].

A number of researchers have noted a low magnesium content in individuals with MVP in erythrocytes, lymphocytes, and blood plasma, which correlates with the severity of clinical symptoms [10, 11]. In MVP, the expression of the Bw 35 antigen of the HLA system is increased, which leads to a decrease in interstitial magnesium; In conditions of its deficiency, fibroblasts produce defective collagen, thus disrupting the metabolism of connective tissue [10, 12].

There is evidence of a positive effect of magnesium supplementation in pregnant women with signs of uCDT and gestational hypertension. Treatment helps to reduce blood pressure and improve well-being: weakness decreases, headache disappears [2, 4].

The most significant clinical sign of uCDT is neurocirculatory dystonia (NCD).

Known pharmacological therapy regimens currently used in pregnant women with this pathology (β-adrenergic blockers, antispasmodics, tranquilizers, sedatives) affect only blood pressure, but not vascular disorders, hemorrhagic syndrome, indicators of vegetative tone, personal anxiety, quality of life, i.e. they do not affect the entire symptom complex characteristic of uCDT.

In this regard, we have studied the efficacy of complex therapy of pregnant women with uCDT with magnesium preparations and a low-frequency traveling pulsed magnetic field.

The pathogenetic justification for the use of BIMPnch and a drug containing magnesium in the treatment of uCDT was the fact that these drugs have sedative, hypotensive, antiarrhythmic, and adaptogenic effects [6, 7].

Examination, treatment and follow-up of 50 pregnant women with uCDT (mean age 29.5±0.5 years) with gestational age from 7 to 38 weeks were carried out. The study included pregnant women whose heart abnormalities were accompanied by other (external and visceral) phenotypic signs of dysplasia (at least 4 signs).

Treatment was carried out in a hospital on the basis of the Department of Pathology of Pregnancy of the Clinic of Obstetrics and Gynecology. All patients received magnesium orotate drug therapy (Magneroth, Vörwag Pharma) 2 tablets 3 times a day (daily dose – 3 g) and physiotherapy BIMPnch.

Pregnant women were prescribed BIMPnh therapy with a magnetic induction power of 1.5 mT, with a pulse repetition rate of 100 Hz, paravertebral at the level of CV_{II} – Th_{V} with paired solenoids of polarity N–S; duration of the procedure – 15 minutes; procedures were carried out 1 time a day; The course accounted for 7-10 procedures. The Alimp-1 device was used as a source of BIMPnch.

To assess the effectiveness of treatment, the dynamics of systolic blood pressure (SBP), diastolic blood pressure (DBP), heart rate (HR), respiratory rate, and heart rate variability were analyzed. Quality of life (QoL) was also assessed.

Heart rate variability was studied by the method of variational pulsometry proposed by R.M. Baevsky. At the same time, they determined: fashion (Mo); Mode Range (AMO) the degree of centralization of the heart rhythm (tension index – IN); the relationship between the activity of the sympathetic and parasympathetic divisions (autonomic equilibrium index – IIR) [1].

To determine QoL, the results of patients' self-assessment of QoL using the VAS (Visual Analog Scale) and DISS (Disability Scale) scales were used.

Doppler examination of uteroplacental and fetal blood flow was carried out with a convex probe with a frequency of 3.5–5.0 MHz and a radius of curvature of the scanning surface of at least 40 mm (ultrasound diagnostic device "Akuson-128XP", USA, "Acuson Corporation", No. 92/38).

Storage and statistical processing of primary data was carried out using the STADIA software package on the Intel Celeron M 410 computer.

One of the main manifestations of uCDT is the subjective sensation of rapid or increased heartbeat. Prior to treatment, these symptoms occurred in 42 (84%) patients. Half of the women reported no apparent cause of tachycardia.

39 (78%) patients experienced subjective pain in the area of the heart. Cardialgias were diverse both in nature (stabbing, aching, a feeling of discomfort in the heart area), and in localization (in the left half of the chest, in the area of the apex of the heart, diffuse), intensity (severe, moderate), duration (from several minutes to several hours). Pregnant women often had to use valocordin or corvalol to stop them.

One of the leading clinical manifestations of uCDT was respiratory syndrome, which was often one of the first to occur. Subjectively, it was perceived as a feeling of shortness of breath in 34 (68%) pregnant women, as a need to take deep breaths periodically in 34 (68%), and as shortness of breath with slight physical, emotional stress or at rest in 21 (42%). Poor tolerance to stuffy rooms was noted by 43 (86%) patients. Respiratory discomfort was often accompanied by palpitations, dizziness, and excessive sweating. The examined patients were also characterized by pronounced lability of blood pressure.

In 33 (66%) women with uCDT, thermoregulation and heat transfer disorders were observed prior to treatment. 19 (38%) patients were bothered by excessive sweating. 13 (26%) pregnant women experienced chills. 8 (16%) women complained of poor tolerance to both high and low temperatures, cold waves or heat waves.

Weakness, lethargy, general malaise, low tolerance to physical and mental stress were among the characteristic manifestations of uCDT in 39 (78%) of the examined. Some of the patients had sleep disturbances: 34 (68%) women experienced drowsiness, and 16 (32%) experienced insomnia. In all the examined, there was a tendency to increase sympathetic tone (AMO, IVR, IN).

All pregnant women with uCDT had a high level of anxiety (55.6±1.0 points), which could not but affect QoL. At baseline, 29 (58%) women rated their QoL as moderate impairment on the DISS scales, 10 (20%) as severe, and 11 (22%) as mild. Pregnant women with uCDT noted that its presence affects work and social life and, to a lesser extent, family (personal) life.

Pre-treatment heartbeat decreased in 10 (20%) pregnant women. Palpitations occurred quite rarely and were provoked by excitement and physical exertion. Pain in the area of the heart occurred less frequently and was less intense during treatment. As a rule, the pain stopped on its own. 6 (12%) patients noted the absence of cardialgia.

In all pregnant women, the feeling of shortness of breath, the need for deep breaths, shortness of breath during physical or emotional exertion decreased (by 20%). Poor tolerance to heat and stuffy rooms remained at the same level.

The examined did not note a significant change in thermoregulation disorders, the frequency of occurrence and intensity of headaches. In 10 (20%) pregnant women, sleep returned to normal. In all patients, the severity of asthenic syndrome decreased, tolerance to physical and emotional stress increased (by 22%).

A significant positive dynamic of SBP, DBP, and heart rate in pregnant women with uCDT in the course of treatment was observed after the 1st procedure and was fixed (all 3 indicators) by the 7th session. SBP decreased from an average of 120.0 ± 2.5 to 113.0 ± 2.4 mmHg. DBP – from 76.2 ± 2.9 to 68.4 ± 2.0 mmHg. Heart rate – from 91.2 ± 2.9 to 79.2 ± 3.9 per minute (p Analysis of heart rate variability revealed a significant decrease in AMO by 8.90 ± 0.02%, IIR by 26.1 ± 0.1 units, MI by 7.3 ± 0.9 units, and an increase in Mo by 0.14 ± 0.03 s, i.e. the indicators approached those at full "vegetative equilibrium".

Doppler examination showed that after complex therapy with the use of Magnerot and BIMPnch in both the second and third trimesters of pregnancy, there was a moderate decrease in resistance indices in the uterine arteries (from 0.620 ± 0.001 to 0.590 ± 0.001 in the second trimester, from 0.570 ± 0.001 to 0.550 ± 0.001 in III), which indicated the activation of blood flow (p Pregnancy in all women ended in childbirth. In none of the cases, the indication for the decision to There was no deterioration in the condition of the mother or fetus.

Conclusion. Thus, complex therapy with Magnerot and BIMPnch in pregnant women with uCDT can reduce the severity of clinical manifestations of NCD syndrome and improve QoL. In pregnant women with signs of circulatory disorders in the mother-placenta-fetus system, the proposed therapy improves hemodynamic indicators.

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